

S4 Table. Model B: Multivariable logistic regression analysis in derivation dataset (N=515)

Predictor		Patients with TB N=52/515 n/N (%)	Unadjusted odds ratio (95% CI)	P value (Wald)	Adjusted ³ odds ratio Model B (95% CI)	P value (Wald)	Adjusted β coefficient (log [adjusted OR]) (95% CI)
Age ¹ , years			1.00 (0.97, 1.03)	0.96			
Sex	Male	23/170 (13.5%)	1				
	Female	29/345 (8.4%)	0.59 (0.32, 1.05)	0.07			
Smoking status	Never smoked	28/354 (7.9%)	1				
	Current or ex-smoker	24/161 (14.9%)	2.04 (1.14, 3.64)	0.02			
Alcohol status	Current	23/207 (11.1%)	1				
	None in last 1 year	29/308 (9.4%)	0.83 (0.47, 1.48)	0.53			
ART status	On ART \geq 3 months	24/347 (6.9%)	1		1		0
	Pre-ART / ART <3 months	28/168 (16.7%)	2.69 (1.51, 4.80)	0.001	2.07 (1.07, 4.01)	0.03	0.73 (0.06, 1.39)
Ever had CPT	No / don't know	19/145 (13.1%)	1				
	Yes	33/370 (8.9%)	0.65 (0.36, 1.18)	0.16			
Previous history of TB	No	33/314 (10.5%)	1				
	Yes	19/201 (9.5%)	0.89 (0.49, 1.61)	0.70			
Cough	No	16/211 (7.6%)	1		1		0
	Yes	36/304 (11.8%)	1.64 (0.88-3.03)	0.12	2.96 (1.50, 5.85)	0.002	1.08 (0.40, 1.77)
Fever	No	38/418 (9.1%)	1				
	Yes	14/97 (14.4%)	1.69 (0.87-3.25)	0.12			
Night sweats	No	31/384 (8.1%)	1		1		0
	Yes	21/131 (16.0%)	2.17 (1.20-3.94)	0.01	1.99 (1.02, 3.89)	0.04	0.69 (0.02, 1.36)
Unintentional weight loss	No	12/280 (4.3%)	1		1		0
	Yes	40/235 (17.0%)	4.58 (2.34-8.96)	<0.001	4.08 (1.96, 8.49)	<0.001	1.41 (0.67, 2.14)
BMI ^{1,2} , kg/m ²			0.88 (0.82, 0.94)	<0.001	0.90 (0.84, 0.97)	0.005	-0.10 (-0.17, -0.03)
CD4 ^{1,2} , cells/mm ³			0.997 (0.995, 0.998)	<0.001	0.997 (0.996, 0.999)	0.009	-0.002 (-0.004, -0.0005)

¹ Age, BMI and CD4 count were modelled as continuous variables

² BMI and CD4 count were modelled as continuous variables, a linear relationship with the outcome was found to be a good approximation after assessment of nonlinearity using fractional polynomials.

³ Adjusted for all variables shown. 100 unit increase in CD4 corresponds to reduction in adjusted odds ratio (aOR) of TB of 0.81 (95% CI 0.69, 0.95); 5 unit increase in BMI corresponds to reduction in aOR of TB of 0.61 (95% CI 0.43, 0.86).

In the multivariable model we tested for interactions between "ART status" and CD4 cell count, "ART status" and BMI, "ART status" and cough, "ART status" and night sweats, "ART status" and weight loss. Interaction term with p<0.05: ART status and cough.

Intercept (log odds) for multivariable model is 0.32

In derivation vs. validation datasets: Hosmer-Lemeshow statistic p=0.81 vs. p=0.01, AUROC 0.82 (95% CI 0.76-0.88) vs. AUROC 0.75 (95% CI 0.69-0.82)